ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

In the Matter of	)	
	)	
Revision of the Commission's Rules to	)	CC Docket No. 94-102
Ensure Compatibility with Enhanced 911	)	
Emergency Calling Systems	)	

To: Chief, Wireless Telecommunications Bureau

AIRTEL WIRELESS LLC
PETITION FOR WAIVER OF SECTION 20.18(g) OF THE RULES

AIRTEL WIRELESS LLC

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TABLE OF CONTENTS

SUMMARY

Airtel Wireless LLC ("Petitioner") respectfully requests that the Federal Communications Commission ("Commission") grant its request for waiver of the enhanced 911 ("E911") Phase II deployment provisions in Section 20.18(g) of the Commission's rules. Petitioner is preparing to offer Specialized Mobile Radio ("SMR") services in Billings, Montana beginning in October 2001, and has elected to deploy a handset-based solution to provide location information to the public safety answering points ("PSAPs") in its service territory.

Although Petitioner intends to implement the necessary handset and network upgrades as quickly as possible, several factors have prevented it from doing so in accordance with the schedule mandated by the Commission's rules. As is clear from the record in this proceeding, no handset-based Phase II solution will be available for deployment by the Commission's October 1, 2001 deadline. Moreover, because Petitioner's system will employ an "island" technology that does not enjoy widespread use, its choice among possible handset solutions is limited to one, an assisted global positioning system ("A-GPS") solution that will not be available for sale and deployment until October 2002.

Petitioner is committed to the rapid improvement of public safety communications and has worked diligently with its equipment vendor to establish an expeditious but realistic deployment timetable. In pursuit of this objective, Petitioner proposes the following schedule:

- begin selling location-capable handsets by October 1, 2002
- ensure location capability of 10% of new iDEN handsets by December 31, 2002
- achieve 50% benchmark by December 1, 2003
- achieve 100% benchmark by December 1, 2004
- achieve 95% total penetration benchmark by December 31, 2005

In addition, because Petitioner does not anticipate delays in transmitting Phase II location data to PSAPs that have made valid requests once location-enabled handsets have been introduced into the market, Petitioner requests a waiver of Section 20.18(g)(2) only through October 1, 2002.

Petitioner's waiver request is "specific, focused and limited in scope, and with a clear path to compliance," and its grant will serve the public interest. Accordingly, the Commission should grant Petitioner's request.

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PETITION FOR WAIVER OF SECTION 20.18(g) OF THE RULES

Airtel Wireless LLC (hereinafter "Petitioner"), by its attorneys and pursuant to Section 1.925 of the Commission's rules, hereby requests a waiver of the enhanced 911 ("E911") Phase II location accuracy provisions contained in Section 20.18(g) of the Commission's rules. Specifically, Petitioner seeks a waiver of the requirement that carriers selecting a handset-based Phase II E911 solution follow a phased-in implementation schedule beginning October 1, 2001. As set forth below, no Phase II solution will be available for the specialized equipment used in Petitioner's communications network by the Commission-mandated deadlines. Petitioner therefore proposes a modified schedule that will permit the deployment of location-capable handsets beginning in the third quarter of 2002. Such a request is consistent with the Commission's goals in this E911 proceeding and is in the public interest.

I. INTRODUCTION

Petitioner is currently preparing to offer Specialized Mobile Radio ("SMR") services in the Billings, Montana metropolitan area. The planned communications system, named Harmony™, is scheduled to begin operating in mid-October 2001 and makes use of Motorola's unique iDEN

technology. The Harmony™ system is a digital integrated wireless communications system offering the core voice communications capabilities of both dispatch and telephone interconnect services. Upon the launch of its Harmony™ system, Petitioner will be one of just a handful of carriers in America providing SMR services using iDEN.[1/]

Based upon its review of reports by similarly-situated carriers, and following extensive discussions with its equipment provider, Petitioner has elected to implement a handset-based, assisted global positioning satellite ("A-GPS") solution to achieve compliance with the Commission's Phase II rules. However, despite its intention to fully comply with the Commission's Phase II E911 requirements, Petitioner is simply unable to meet the implementation schedule for the handset component of its handset-based solution. As has been amply demonstrated in the record of this proceeding,[2/] no Phase II-compliant handset solution will be generally available to wireless carriers prior to October 1, 2001, the first of the Phase II deadlines for carriers opting for a hybrid or handset-based solution.[3/] Moreover, because Petitioner's

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[1/] See Comments of Pacific Wireless Technologies, Inc. (filed Jan. 5, 2001).

[2/] See, e.g., Leap Wireless International, Inc. Petition for Partial Waiver of E-911 Phase II Implementation Milestones at 13-16 (Aug. 23, 2001); Comments of AT&T Wireless Services, Inc. at 6 (Aug. 20, 2001) (supporting Sprint PCS petition for waiver filed in order to deploy an aided Global Positioning Satellite solution for its CDMA network); Inland Cellular Telephone Co. Petition for Limited Waiver of Sections 20.18(e) and (g) of the Rules at 3 (July 30, 2001) ("Inland Petition"); Qwest Wireless, LLC and TW Wireless, LLC's Petition for Extension of Time or Waiver of Section 20.18 of the Rules at 8 (July 25, 2001) ("Qwest Petition").

[3/] Under Section 20.18(g)(1) of the Commission's E911 rules, carriers selecting a handset or hybrid solution must begin selling and activating location-capable handsets by October 1, 2001, regardless of whether a valid PSAP request has been received. The rules further require such carriers to ensure that at least 25% of new handset activations be location capable by December 31, 2001; that 50% of handset activations be location-capable by June 30, 2002; that 100% of new

(continued...)

communications system will use a proprietary "island" technology that is not widely employed, Petitioner faces a sharply limited range of solutions for Phase II and is effectively bound by the choices of larger providers of SMR services using iDEN technology.

As is clear from the record, an A-GPS handset solution for iDEN systems is not anticipated until October 2002.[4/] Accordingly, Petitioner requests that the Commission consider Petitioner to be in compliance with Section 20.18(g) if it begins selling and activating location-capable handsets by October 1, 2002, ensures that at least 10% of the handsets sold and activated by December 31, 2002 are location capable, achieves the 50% benchmark by December 1, 2003, and the 100% benchmark by December 1, 2004. Petitioner anticipates that it will meet the 95% ALI handset penetration deadline of December 31, 2005.

Because Petitioner's request is "specific, focused, and limited in scope, and with a clear path to compliance," waiver of the Commission's October 1, 2001 deadline is warranted.[5/] Moreover, a handset solution will enable customers to benefit from a superior degree of location precision as location-capable handsets are put into use.[6/] Accordingly, the requested waiver is in

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[3/](...continued)
digital handset activations be location-capable by December 31, 2002; and that 95% penetration of location-capable handsets be achieved by December 31, 2005. 47 C.F.R. § 20.18(g)(1).

[4/] See Nextel Communications, Inc. and Nextel Partners, Inc. Joint Report on Phase II Location Technology Implementation and Request for Waiver at 9 (filed Nov. 9, 2000) ("Nextel Report"), Comments of Motorola at 3 (filed Jan. 5, 2001).

[5/] Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Fourth Memorandum Opinion and Order, 15 FCC Rcd 17442, 17457-58 (2000) ("Fourth MO&O").

[6/] See Revision of the Commission's Rules to Ensure Compability with Enhanced 911 (continued...)

the public interest and should be granted.

II. PETITIONER'S HANDSET SOLUTION IS THE BEST AVAILABLE LOCATION TECHNOLOGY FOR ITS SPECIALIZED SYSTEM

When the Harmony™ system is launched in mid-October 2001, Petitioner will become one of just a handful of carriers in the United States that make use of iDEN technology.[7/] Like other providers of this "island" technology, Petitioner faces limited options for a solution to comply with the Commission's Phase II accuracy requirements. In fact, it is clear from other parties' submissions in this proceeding that only an A-GPS solution is adequate to the task.

Nextel Communications, Inc. ("Nextel"), the nation's largest provider of iDEN-based services, has compiled a substantial record supporting the use of A-GPS technology. In a filing with the Commission last November, Nextel stated that it had determined that only an A-GPS location technology would satisfy the Commission's location requirements.[8/] In response to a request from the Commission for further information, Nextel provided the Commission with extensive documentation of the field tests and analyses that had led to its decision to choose an A-GPS technology.[9/] According to its filings with the Commission, Nextel began the process in 1998

[6/](...continued)
Emergency Calling Systems, Third Report and Order, 14 FCC Rcd 17388, 17403 (1999) ("Third Report and Order"); ALLTEL Communications, Inc. Petition for Waiver of Sections 20.18(e) and (g) of the Commission's Rules at 30 (July 25, 2001) ("ALLTEL Petition").

[7/] iDEN is a fully integrated digital wireless network that makes it possible to offer both dispatch (private and one-to-many) and interconnect (supporting calls between subscribers and the public switched telephone network) calling services using the same equipment.

[8/] See Nextel Report at 15.

[9/] See Response of Nextel Communications, Inc. and Nextel Partners, Inc. to Order of the Wireless Telecommunications Bureau (filed May 21, 2001) ("Nextel Response").

by issuing a request for information ("RFI") to ten different vendors of location technology. After receiving responses and following up with supplemental requests, Nextel had narrowed the field to three potential location solutions: a handset-based A-GPS solution originally developed for CDMA systems, a network overlay solution, and Motorola's proposed enhanced observed time difference ("E-OTD") network solution. Based on its field tests, Nextel reported that "only the A-GPS solution integrated into the iDEN handset[10/] would meet the public interest goals underlying the Commission's Phase II ALI requirements and provide Nextel's subscribers with an accurate, economically acceptable Phase II E911 solution."[11/]

The other two technologies, a network overlay solution and Motorola's E-OTD network solution, were found to be lacking. With regard to a network overlay solution, Nextel found that the scope and costs of implementing such a solution would be prohibitive. Additionally, Nextel stated that such an undertaking would yield accuracy levels that do not meet Phase II accuracy requirements. Specifically, Nextel cited a field trial in which a network overlay solution could only locate the caller within 120 meters 67% of the time and 442 meters 95% of the time.[12/] As for the proposed E-OTD solution, Nextel found that, although Motorola's iDEN technology is GSM-based, and E-OTD has been selected by VoiceStream and other carriers with GSM networks, iDEN has significant differences from standard GSM technologies that adversely affect the location

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[10/] Nextel conducted field tests using a CDMA-based A-GPS solution because none yet existed for iDEN handsets. See Nextel Report at 3 n.5.

[11/] Id. at 15.

[12/] Id. at 18.

accuracy of E-OTD.[13] The estimated accuracy provided by an E-OTD solution on an iDEN network is an average of 382 meters 67% of the time and 1327 meters 95% of the time, missing the Commission's accuracy requirements by a wide margin.[14]

Motorola has expressed strong support for Nextel's choice of a handset-based A-GPS Phase II solution. In its comments on Nextel's November 2000 report and request for waiver, Motorola confirmed that "it is readily apparent from simulations and other testing that [A-GPS] location solutions can be expected to provide accuracy levels in compliance with the Commission requirements."[15] Motorola also confirmed that hybrid location technologies such as E-OTD and Advanced Forward Link Triangulation ("A-FLT") would not meet the Phase II accuracy requirements.[16]

Southern Communications Services, Inc. d/b/a Southern LINC ("Southern"), another SMR operator using Motorola's iDEN technology, similarly evaluated a number of location technologies for its network and concluded that "the A-GPS solution is the best approach in terms of accuracy performance and use of network resources."[17] Southern emphasized the advantage of A-GPS over network-based time difference of arrival ("TDOA") solutions:

> On iDEN systems, the fact that an iDEN handset "powers down" (i.e. reduces its RF energy output) to conserve battery life when the user is near a cell site ... In

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[13] See id. at 16-17.

[14] See id. at 16.

[15] See Comments of Motorola (filed Jan. 5, 2001).

[16] See id. at 2-3.

[17] See Southern LINC® Petition for Limited Waiver of Section 20.18 of the Commission's Rules at 10 (filed Sept. 18, 2001).

> such scenarios, handset-based solutions relying upon GPS technology have much greater potential to provide accurate location data because of their reliance upon achieving a "line of sight" with GPS satellites, rather than cell sites, to determine a caller's location."[18]

Explaining its rejection of an E-OTD solution, Southern pointed to the same meager test results referenced in Nextel's November 2000 report. Southern also emphasized that on an iDEN system, an E-OTD solution would require significant RF resources and would risk delayed call setup time due to the need for completing certain location measurements prior to call setup.[19]

Both Nextel and Southern have stressed that they are not alone: any carrier using iDEN technology faces the same challenges. Unlike more widely used air interfaces such as TDMA and CDMA, total iDEN subscriber counts number only in the millions, rather than tens of millions. The smaller subscriber base, together with the proprietary nature of iDEN technology, has resulted in a dearth of attention from location technology vendors in comparison to other wireless technologies.[20] Accordingly, Petitioner finds itself among a small number of carriers that have only one realistic Phase II solution. Its choice of A-GPS was therefore not a "choice" at all.

III. PETITIONER'S PROPOSED DEPLOYMENT SCHEDULE WILL ENSURE THAT A PHASE II SOLUTION IS DEPLOYED EXPEDITIOUSLY

Based on its review of the extensive information contained in the record, Petitioner recognizes that an A-GPS solution represents its best chance to achieve compliance with the Commission's Phase II location accuracy requirements in as short a time as possible. To this end, Petitioner has been working with Motorola to establish a schedule for implementation of an A-GPS solution for its Harmony™ system. However, as demonstrated, the filings of Southern and Nextel,

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[18] Id.

[19] Id. at 11.

[20] See id. at 8; Nextel Report at 8; Nextel Ex Parte Letter to Ms. Monica DeSai, Federal Communications Commission (Aug. 8, 2001).

such a solution will not be available by the Commission's October 1, 2001 deadline or by Petitioner's projected launch date in mid-October. As Nextel has emphasized, no integrated A-GPS solution currently exists for iDEN handsets, and significant work remains to be done before such a solution can be made generally available:

> ... Motorola must develop a prototype iDEN handset with the A-GPS capability and modify the iDEN network infrastructure to support the over-the-air messaging that is inherent in this handset-based solution. Once that is completed (by second quarter 2001, according to Motorola), Motorola's development and production of the A-GPS handset will require at least 18 months.[21/]

Against the background of these apparently unavoidable delays, Petitioner intends to begin selling and activating integrated A-GPS handsets no later than October 1, 2002. Following this initial deployment, Petitioner further comments to deploying additional A-GPS handsets as follows:

- December 31, 2002: 10% of all new iDEN handsets
- December 1, 2003: 50% of all new iDEN handsets
- December 1, 2004: 100% of all new iDEN handsets
- December 31, 2005: 95% of entire subscriber base

Petitioner believes this timetable represents the most expeditious deployment schedule possible under the circumstances. It is consistent with the deployment timetables proposed by similarly-situated carriers, including Nextel and Southern. Additionally, Petitioner's proposal ensures compliance with the Commission's total subscriber penetration benchmark of 95% by December 31, 2005. Thus, Petitioner's proposal represents no long-term delay and only a slight modification of the intermediate benchmarks.

[21/] See Nextel Report at 9.

IV. PETITIONER MEETS THE STANDARD FOR GRANT OF THE REQUESTED WAIVER

Generally, the Commission's rules may be waived when there is good cause shown[22/] and when "special circumstances warrant a deviation from the general rule, and such a deviation will serve the public interest."[23/] In the context of E911, the Commission has recognized that individual waivers that are "specific, focused and limited in scope, and with a clear path to compliance" may be granted where, due to "technology-related issues" or "exceptional circumstances," a wireless carrier is unable to meet the October 1, 2001 deadline.[24/] As explained below, Petitioner's request satisfies this standard.

First, Petitioner is presenting a waiver request that is specific, focused and limited in scope. Rather than seek a general waiver of Phase II location requirements or an indefinite extension of the Phase II handset deployment deadlines, Petitioner requests a limited extension of four of the five Phase II deadlines contained in Section 20.18(g)(1) of the rules. Because Petitioner envisions an aggressive marketing campaign to speed the introduction of location-capable handsets to subscribers, Petitioner believes that an extension of the December 31, 2005 deadline for 95% total handset penetration is not needed. In addition, Petitioner only asks that it be granted a waiver of Section 20.18(g)(2) up to October 1, 2002, the day by which it has committed to begin selling and activating location-capable iDEN handsets. Well in advance of deploying location-capable handsets, Petitioner intends to make the necessary network upgrades and to cooperate with the PSAPs in its service area to achieve a mutual capability to collect, transmit and process Phase II location data. Accordingly, once location-capable handsets are introduced into the marketplace,

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22/ 47 C.F.R. § 1.3.

23/ Fourth MO&O at 17457; Northeast Cellular Telephone Co. v. FCC, 897 F.2d 1164, 1166 (D.C. Cir. 1990) citing WAIT Radio v. FCC, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

24/ Fourth MO&O at 17457-58.

Petitioner does not anticipate delays in sending Phase II location information to PSAPs that have made valid requests.

Second, Petitioner's request is structured with a "clear path to compliance." Rather than request a "broad, generalized waiver"[25] or an indefinite extension, Petitioner has formulated a proposed schedule that constitutes the best implementation timeline possible under the circumstances. Specifically, Petitioner would begin selling and activating location-capable handset by October 1, 2002 rather than October 1, 2001 and ensure that 10% of handsets sold and activated by December 31, 2002 are location capable; the 50% benchmark would be extended to the December 1, 2003; the date for the 100% benchmark would be extended to December 1, 2004; and the 95% benchmark for ALI handset penetration would remain at December 31, 2005. As described above, this timetable is based on specific commitments by Motorola and mirrors the deployment schedules proposed by Nextel, Southern, and other carriers facing similar circumstances.

Third, despite its efforts to comply with the Commission's Phase II requirements in a timely fashion, Petitioner has faced technological issues that have hindered its progress. Specifically, as described above,[26] Petitioner is preparing to launch a communications network that uses Motorola's unique iDEN technology. Because of the smaller size of the markets served and the proprietary nature of this technology, Petitioner faces extremely limited options as it attempts to achieve compliance with the Commission's Phase II requirements. As the record reflects, Motorola's A-GPS solution is the only technology that is likely to provide Phase II-compliant accuracy levels on an iDEN system. This technology must undergo further development and testing and thus will not be available for sale to Petitioner's subscribers before the October 1, 2001

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[25] See id.

[26] See supra pp. 4-7.

deadline. In these circumstances, Petitioner has done its best to come as close as possible to meeting the Commission's deadlines by working with Motorola to develop a realistic timetable to ensure the speedy deployment of A-GPS technology as it becomes available.

Grant of the requested waiver is in the public interest. The public policy behind the Commission's E911 rules is to meet important public safety needs as quickly as reasonably possible.[27/] Allowing Petitioner to introduce location-capable handsets on a more graduated schedule would serve this objective. As the Commission has recognized, any delays resulting from a phased-in handset-based approach would likely be offset by the increased accuracy of such solutions.[28/] Indeed, it is because of the likely increased accuracy of handset-based technologies that the Commission amended its rules to impose a higher accuracy benchmark for handset-based solutions.[29/] Although A-GPS has not yet been integrated into an iDEN handset, field tests conducted on other technologies have yielded promising results.[30/] As reflected in the letter attached as Appendix A, it appears likely that these accuracy levels will be achieved by Petitioner's chosen Phase II solution. Clearly, Petitioner should not be punished for its choice of a superior location technology, particularly where it has made a commitment to achieve full compliance by December 31, 2005, the last of the Commission's Phase II compliance deadlines.

V. CONCLUSION

For the reasons set forth above, Petitioner requests a waiver of Section 20.18(g) of the rules. The Commission may contact James Brock, Airtel Wireless LLC, 2826 Via Florentine,

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27/ See Fourth MO&O, 15 FCC Rcd at 17449.

28/ See Third Report and Order, 14 FCC Rcd at 17403 ("Moreover, to the extent that a phase-in might delay [automatic location identification] implementation, handset-based solutions may well generate offsetting benefits. For example, it appears that handset-based solutions may achieve greater accuracy.")

29/ See id. at 17419.

30/ See id.

Henderson, NV 89014; Phone: 702-897-9591; FAX: 702-897-0544; e-mail: brockjs@aol.com with any questions regarding this request. Please direct a copy of any written communications to undersigned counsel directly.

Respectfully submitted,

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Dated: September 26, 2001

CERTIFICATE OF SERVICE

I, Janelle Wood, a secretary in the law office of Lukas, Nace, Gutierrez & Sachs, hereby certify that I have, on this 26th day of September, 2001, sent via hand delivery, a copy of the foregoing PETITION FOR WAIVER OF SECTION 20.18(g) OF THE RULES filed today to the following:

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